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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,749	04/30/2001	W. Kenneth Wilkinson		4248

7590 10/15/2004  
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Arlington, VA 22202

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/843,749

**Applicant(s)**

WILKINSON, W. KENNETH

**Examiner**

Rabon Sergeant

**Art Unit**

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 080904.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. The amendment of June 14, 2004 has been entered, and the finality of the Office action of February 11, 2004 has been withdrawn. In view of applicant's response, the objection and rejections set forth within paragraphs 1-5 of the Office action of February 11, 2004 have been withdrawn.

2. Claims 1 and 5-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant has failed to clearly define the term, "mixed-polyether-polyester diol". It cannot be determined if the term refers to a physical mixture of a polyether diol and a polyester diol or if the term refers to a single polymeric diol containing both polyether and polyester segments.

3. Claims 1 and 5-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear if the properties recited within claim 1 apply to the pre-chain extended polyurethane (the material not subjected to the post-treatment of claim 8) or to the post diamine chain extended polyurethaneurea of claims 8 and 9.

4. Claims 1 and 5-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not

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described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

It cannot be determined from applicant's disclosure if the properties recited within claim 1 apply to the pre-chain extended polyurethane (the material not subjected to the post-treatment of claim 8) or to the post diamine chain extended polyurethaneurea of claims 8 and 9.

5. Claims 10-29 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for polyurethanes and processes for producing polyurethanes having the properties recited at lines 2-6 of page 8 of the substitute specification, does not reasonably provide enablement for polyurethanes and processes for producing polyurethanes lacking the aforementioned properties that will yield viable polyurethane fibers. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Applicant has failed to provide enablement for the production of polyurethanes lacking the aforementioned properties which will yield viable polyurethane fibers, and the position is taken that applicant's claims should be limited to be commensurate in scope with the level of enablement provided. Aside from producing the disclosed polyurethanes having the disclosed properties, the skilled artisan would be unable to practice the instant invention or realize its goals without having to resort to undue experimentation.

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 5-9, 12, 14, 16, 22, 24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Seneker et al. ('118 or '357).

Patentees disclose the production of Spandex-type fibers, wherein isocyanate terminated prepolymers, produced from a blend of a high molecular weight polyol and a low molecular weight polyol, are chain extended with an aliphatic amine. See abstracts and columns 6-10.

Patentees further disclose that the prepolymer method promotes the uniform distribution of hard segments within the polymer matrix and that this uniform distribution of the hard segments yields unusual strength and elongation properties. See column 6, lines 59-62. Patentees additionally disclose that the fibers have high elongation and molecular weights that meet those claimed by applicant. Since the fibers are produced from equivalent reactants and have overlapping molecular weights, the position is taken that applicant's claimed elongation and tenacity values are inherent properties of the disclosed fibers. The position is further taken that no evidence has been provided to indicate that the claimed processes cause the products by process to be patentably distinct from the prior art. It is noted that the references disclose that reaction spinning may be used to produce the fibers (reaction spinning is considered to be akin to melt spinning). See last three lines of column 6. It is further noted that the subject matter of claims 1 and 5-9 do not require melt spinning.

8. Within the responses of March 3, 2003 and June 30, 2003, applicant has argued that the polyurethaneurea compositions of Seneker et al. do not melt and are, therefore, not melt-spinnable. This argument is flawed for the following reason. The issue is not whether the polyurethaneurea is melt spinnable; the issue is whether the polyurethane, prior to reaction with the diamine, is capable of being melt spun and cured by reaction with a diamine to yield a melt-spun fiber. In view of the reactants used to produce the pre-diamine extended polyurethane, the position is taken that the prior art polyurethanes are thermoplastic and capable of being melt spun. This position is further supported by the fact that applicant's reactants are equivalent to those disclosed, and applicant's polyurethane is melt processable. Additionally, in further support of the examiner's position, applicant's attention is directed to the disclosure of Smith et al. ('902). Smith et al. disclose similar compositions to those of the prior art and disclose that they may be processed by melt spinning or the similar reaction spinning to produce fibers. See column 8, lines 51-63 within Smith et al. Smith et al. has been relied upon solely to support the examiner's arguments with respect to the teachings of Seneker et al and does not constitute part of the rejection. Furthermore, in view of applicant's argument and the fact that equivalent reactants are utilized, it stand to reason that applicant's polyurethaneurea also is not melt-spinnable; however, his pre-extended polyurethane is melt-spinnable.

9. Also, within the responses of March 3, 2003 and June 30, 2003, applicant has argued that the compositions of Seneker et al. are composed of randomly spaced hard and soft segments; therefore, the properties of the respective compositions differ. This argument in no way addresses the aforementioned disclosure within the prior art wherein it is stated that the

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prepolymer method of the references promotes the uniform distribution of hard segments within the polymer matrix and that this uniform distribution of the hard segments yields unusual strength and elongation properties. See column 6, lines 59-62. Therefore, according to the teachings of the prior art, the hard and soft segments are not randomly spaced.

10. It is regretted that this response to applicant's argument regarding the prior art rejection has not been set forth earlier in prosecution.

Any inquiry concerning this communication should be directed to R. Sargent at telephone number (571) 272-1079.

  
RABON SERGENT  
PRIMARY EXAMINER